

ABSTRACT OF THE DISCLOSURE

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3 A videoconferencing apparatus includes a multi-point
4 (MP) conference application that enables the apparatus to
5 combine and distribute audio and video signals received
6 from a plurality of remote conference endpoints, thereby
7 obviating the need to provide a separate multi-point
8 control unit (MCU) having hardware-based inverse
9 multiplexers (IMUXs). The videoconferencing apparatus has
10 a plurality of communication ports (typically ISDN ports)
11 for coupling the videoconferencing apparatus to the remote
12 endpoints through a switched network. The MP conference
13 application is configured to generate, for each remote
14 conference endpoint participating in a conference, discrete
15 instances of a signal processing train by means of
16 dynamically allocable IMUXs, each processing train
17 including a communication process (including
18 multiplexing/demultiplexing and signaling functions) and
19 audio/video/data codecs. Signals received at the
20 communication ports are directed to the appropriate signal
21 processing train for separate processing of each endpoint
22 session. The processed audio and video signals are
23 subsequently conveyed to an audio mixer and video switching
24 module for combination with locally-generated audio and

1 video signals. The outputs of the audio mixer and video
2 switching module are sent to each of the plurality of
3 signal processing trains, which process the combined
4 signals according to a transmit mode for distribution to
5 the remote endpoints over the switched network.

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